

## Broadband Wireless Data Acquisition and Control Device, Phase I

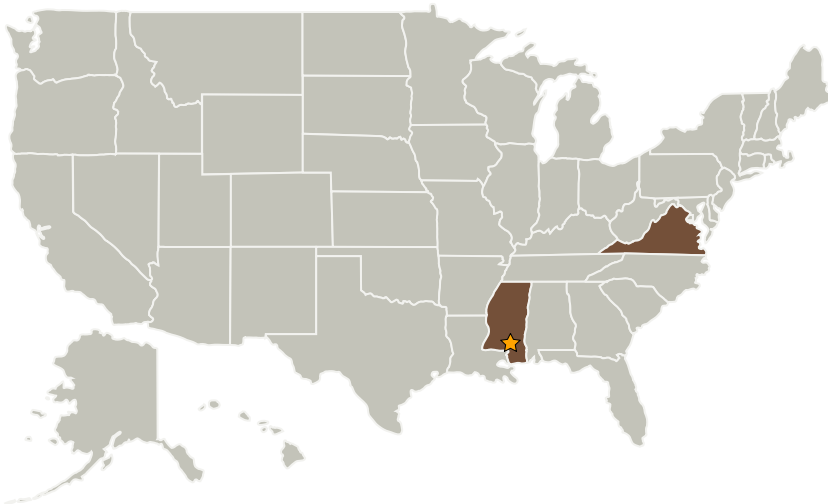
Completed Technology Project (2004 - 2005)



## Project Introduction

Mobitrum is proposing to develop a broadband wireless device for real-time data acquisition and monitoring applicable to the field instrumentation and control systems associated with ground testing facilities. This effort is targeted for data management and intelligent sensor fusion across local and mobile computational platforms for real-time graphical representation and methods for collaborative distribution, efficient storage, and archival. This effort will include (1) Design of the wireless device to maximize the capability of the rocket engine ground testing and safety assurance that include: power consumption, reliability, performance, data rate, throughput, signal coverage, security, configurability, portability, and cost; (2) Design of the wireless device architecture including network topologies, user's query language, data representations and formats, communication modules, low-level device driver, fault tolerance, portability, and performance; and (3) Specify smart agents for rules, procedures, software algorithms, and techniques for designing a high-speed wireless portal system. Smart agents will increase the capability of the data acquisition and health monitoring from remote access and increases the safety. This proposed enabling technology will provide NASA a cost-effective and high-speed tool for collaborative data management and distribution, sensing and monitoring, and other situational awareness such as testing infrastructure and facilities.

## Primary U.S. Work Locations and Key Partners



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## Organizational Responsibility

### Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

### Lead Center / Facility:

Stennis Space Center (SSC)

### Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Stennis Space Center(SSC)	Lead Organization	NASA Center	Stennis Space Center, Mississippi
Mobitrum Corporation	Supporting Organization	Industry	McLean, Virginia

Primary U.S. Work Locations	
Mississippi	Virginia

## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

Carlos Torrez

**Principal Investigator:**

Ray Wang

## Technology Areas

**Primary:**

- TX13 Ground, Test, and Surface Systems
  - └ TX13.2 Test and Qualification
    - └ TX13.2.4 Verification and Validation of Ground, Test, and Surface Systems